

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (currently amended) ~~Series (1)~~ A series of electrolytic cells ~~intended for the production of aluminium by means of fused bath electrolysis according to the Hall-Heroult process and comprising:~~

- a plurality of electrolytic cells ~~(101, 102,... 101', 102'...)~~ arranged ~~so as to~~ form at least one first line of cells and one second lines of cells that are rectilinear and parallel with each other, said cells ~~(101, 102,... 101', 102'...)~~ being arranged transversally with the longitudinal axis A, A' of each line with a constant center distance Eo between the cells, each cell ~~(101, 102,... 101', 102'...)~~ having a length Lo;

- connecting conductors ~~(12,... 17)~~ between the cells of each line;

- ~~an so-called~~ "internal" correction circuit ~~(200)~~, comprising at least one first internal correction conductor ~~(20)~~, located along the first line on the side thereof facing the second line, one second internal correction conductor ~~(20')~~, located along the second line on the side thereof facing the first line, and at least one ~~so-called~~ "internal" connecting conductor ~~(21)~~;

- ~~a so-called~~ "main" connecting circuit ~~(400)~~ between the end cell ~~(101)~~ of the first line of cells and the end cell ~~(101')~~ of the second line of cells;

and characterised in that ~~wherein~~, for at least one of said lines of cells:

- the main connecting circuit ~~(400)~~ comprises at least one layer of conductors ~~(40, 40')~~ wherein each conductor in the at least one layer of conductors (401, 401') is connected to the end cell ~~(101, 101')~~ of the line and extends to a determined distance (D2, D2') therefrom,

- the internal correction circuit ~~(200)~~ ~~also further comprises comprising~~ at least one rectilinear conductor ~~(23, 23')~~, referred to as the "transverse segment", which is connected to the internal correction conductor ~~(20, 20')~~, and is arranged perpendicularly with respect to the longitudinal axis A, A' of the line and runs along the end cell ~~(101, 101')~~ of the line of cells, at a determined distance (D1, D1'), over a determined portion L of the length Lo of the end cell.

2. (currently amended) ~~Series~~ The series of electrolytic cells according to claim 1, ~~characterised in that~~ wherein the determined portion L is greater than 0.5 Lo.
3. (currently amended) ~~Series (1)~~ The series of electrolytic cells according to claim 1, ~~wherein characterised in that~~ the determined fraction-portion L is greater than 0.8 Lo.
4. (currently amended) ~~Series (1)~~ The series of electrolytic cells according to ~~any one of~~ claims 1 to 3, ~~wherein characterised in that~~ or each distance (D2, D2') is at least equal to once the center distance Eo.
5. (currently amended) ~~Series (1)~~ The series of electrolytic cells according to ~~any one of~~ claims 1 to 3, ~~wherein characterised in that~~ each distance (D2, D2') is at least equal to twice the center distance Eo.
6. (currently amended) ~~Series (1)~~ The series of electrolytic cells according to ~~any one of~~ claims 1 to 5, ~~wherein characterised in that~~ the at least once or each layer of conductors (40, 40') covers at least 80% of the length Lo of the cells ~~(101, 102, ... 101', 102', ...)~~.
7. (currently amended) ~~Series (1)~~ The series of electrolytic cells according to ~~any one of~~ claims 1 to 6, ~~characterised wherein in that~~ the at least one or each layer (40, 40') is plane.
8. (currently amended) ~~Series (1)~~ The series of electrolytic cells according to ~~any one of~~ claims 1 to 7, ~~characterised in that~~ wherein the conductors (401, 401') of each of the or each at least one layer (40, 40') of conductors are distributed so as to be arranged parallel to each other and located approximately at the same distance from each other.
9. (currently amended) ~~Series (1)~~ The series of electrolytic cells according to ~~any one of~~ claims 1 to 8, ~~characterised in that~~ wherein the main connecting circuit (400) comprises at least one joining conductor (41, 41'), to which the conductors (401, 401') of the or each of the at least one layer of conductors (40, 40') are connected.
10. (currently amended) ~~Series (1)~~ The series of electrolytic cells according to claim 9, ~~characterised in that~~ wherein the joining conductor (41, 41') is rectilinear, arranged perpendicularly with respect to the longitudinal axis A, A' of the line and located at ~~the or each~~ determined distance (D2, D2').

11. (currently amended) ~~Series (1)~~The series of electrolytic cells according to ~~any one of claims 9 or 10, characterised in that~~wherein the length of the joining conductor ~~(41, 41')~~ is substantially equal to the width W of the at least one layer of conductors~~or each layer (40, 40')~~.

12. (currently amended) ~~Series (1)~~A series of electrolytic cells according to ~~any one of claims 1 to 11, wherein characterised in that~~ the main connecting circuit ~~(400)~~ comprises a so-called "transverse" conductor ~~(43)~~ arranged perpendicularly with respect to the longitudinal axis A, A' of the lines of cells and at a determined distance (D3) from the end cell ~~(101, 101')~~ of the lines.

13. (currently amended) ~~The series~~Series (1) of electrolytic cells according to claim 12, ~~wherein characterised in that~~ the main connecting circuit ~~(400)~~ comprises at least one joining conductor ~~(41, 41')~~, to which the conductors ~~(401, 401')~~ of the at least one layer of conductors ~~(40, 40')~~ are connected, and in that ~~the or each~~ joining conductor ~~(41, 41')~~ is rectilinear, arranged perpendicularly with respect to the longitudinal axis A, A' of the lines and located at said determined distance D2 and/or D2'.

14. (currently amended) ~~The series~~Series (1) of electrolytic cells according to claim 13, ~~wherein characterised in that~~ the main connecting circuit ~~(400)~~ also further comprises a connecting conductor ~~(42, 42')~~ connected to the joining conductor ~~(41, 41')~~, ~~on one hand~~, and to the transverse connecting conductor ~~(43)~~, ~~on the other, in order to ensure the electrical continuity between these conductors, and in that~~wherein the connecting conductor ~~(42, 42')~~ is rectilinear, parallel with the longitudinal axis A, A' of the line and located at a determined distance of said axis.

15. (currently amended) ~~The series~~Series (1) of electrolytic cells according to ~~any one of claims 1 to 14, wherein characterised in that~~ the internal connecting conductor ~~(21)~~ comprises a so-called "transverse" conductor arranged perpendicularly with respect to the longitudinal axis of the lines A, A' and at a determined distance (D4) of the end cell ~~(101, 101')~~ of the lines.

16. (currently amended) ~~The series~~Series (1) of electrolytic cells according to ~~any one of claims 1 to 15, characterised in that it also comprises a so-called~~ further comprising an "external" correction circuit ~~(300)~~, ~~comprising including~~ at least one first external correction conductor ~~(30)~~, located along the first line on the side thereof opposite the second line, at least one second external correction conductor ~~(30')~~, located along the second line on the side thereof opposite the first line, and at least one ~~so-called~~ external connecting conductor ~~(31)~~.

17. (currently amended) ~~The series~~ Series (1) of electrolytic cells according to claim 16, ~~wherein characterised in that the external connecting conductor (31) comprises a so-called~~ transverse conductor arranged perpendicularly with respect to the longitudinal axis of the lines A, A' and at a determined distance (D5) from the end cell ~~(101, 101')~~ of the lines.

18. (New) A series of electrolytic cells for the production of aluminium by means of fused bath electrolysis according to the Hall-Heroult process comprising:

a plurality of electrolytic cells arranged to form at least one first line of cells and one second line of cells that are rectilinear and parallel with each other, said cells being arranged transversally with the longitudinal axis of each line;

a connecting conductor between a cell in the first line and a cell in the second line; and

an internal correction circuit, comprising at least one first internal correction conductor located along the first line on the side thereof facing the second line, and at least one second internal correction conductor located along the second line on the side thereof facing the first line, and at least one internal connecting conductor, and further comprising at least one rectilinear conductor which is arranged perpendicularly with respect to the longitudinal axis of the first line and is connected to said at least one internal connecting conductor.

19. (New) The series of electrolytic cells according to claim 18, wherein said at least one rectilinear conductor crosses at least one conductor connected to an end cell of said at least one first line of cells.

20. (New) A series of electrolytic cells for the production of aluminium by means of fused bath electrolysis according to the Hall-Heroult process comprising:

a plurality of electrolytic cells arranged to form at least one first line of cells and one second line of cells that are rectilinear and parallel with each other, said cells being arranged transversally with the longitudinal axis of each line;

connecting conductors between the cells of each line; and

an internal correction circuit, comprising at least one first internal correction conductor, located along the first line on the side thereof facing the second line, at least one second internal correction conductor located along the second line on the side thereof facing the first line, and at least one internal connecting conductor, and further comprising at least one rectilinear

conductor which is arranged perpendicularly with respect to the longitudinal axis of the line and is connected to said at least one internal connecting conductor, and said at least one rectilinear conductor overlaps at least one conductor connected to an end cell of said at least first line of cells.